CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 77-88

NPDES NO. CA0037753

WASTE DISCHARGE REQUIREMENTS FOR:

SANITARY DISTRICT NO. 5 - MAIN PLANT
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board), finds that:

1. Sanitary District No. 5 of Marin County (hereinafter discharger), by application dated March 7, 1977 has applied for renewal of waste discharge requirements and a permit to discharge wastes from its Main plant under the National Pollutant Discharge Elimination System.

2. The discharger presently discharges municipal wastewater receiving primary treatment into Raccoon Straits, a water of the United States at a point south of the intersection of Paradise Drive and Mar West Street in Tiburon (Latitude 37 deg., 52 min., 20 sec.; Longitude 122 deg., 26 min., 55 sec.).

3. The report of waste discharge describes the existing discharge as follows (Annual Average values):

   Average Flow: 0.92 million gallons per day (mgd)
   Design Flow: 1.4 million gallons per day (mgd)

Constituents	Milligrams per Liter	Pounds per Day
BOD	151	1,160
Suspended Matter	101	775
Chlorine Residual	0	0

4. This project involves the continued operation of a publicly-owned facility to provide sewerage service with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.

5. Section 301(b) of the Federal Water Pollution Control Act Amendments of 1972 requires all publicly-owned treatment works to achieve effluent limitations based upon secondary treatment no later than July 1, 1977. Secondary treatment has been defined by the EPA Administrator in 40 CFR 133, dated July 26, 1976.

6. The Board intends to consider adoption of an Enforcement Order for Issuance of a Time Schedule for the discharger to insure timely compliance with secondary-treatment requirements. The discharger will not meet the secondary-treatment standards prescribed by the Federal Act prior to the July 1, 1977 deadline.

7. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board on April 8, 1975. The Basin Plan contains water quality objectives for San Francisco Bay.

8. The beneficial uses of Raccoon Straits and contiguous waters are:

    a. Recreation
    b. Fish migration and habitat
    c. Habitat and resting for waterfowl and migratory birds
    d. Esthetic enjoyment
    e. Navigation

9. The discharge is presently governed by Waste Discharge Requirements Order Nos. 74-206 and 76-42 which allow discharge to San Francisco Bay.

10. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The discharge of wastes at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

2. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system.

3. The average dry weather flow shall not exceed 1.4 mgd. Average shall be determined over three consecutive months each year.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits.

Constituent	Units	30-day Average	7-day Average	Maximum Daily	Instantaneous Maximum
a. Settleable Matter*	ml/l/hr	0.1			0.2
b. BOD	lbs/day	1,320		2,640	
	kg/day	600		1,200	
	mg/l	30	45	60	
c. Suspended Solids	lbs/day	1,320		2,640	
	kg/day	600		1,200	
	mg/l	30	45	60	
d. Grease and Oil	lbs/day	441		882	
	kg/day	200		400	
	mg/l	10		20	
e. Chlorine Residual	mg/l				0.0

*See B.2. for Interim Effluent Limitation

2. The following interim limitation shall apply prior to achieving full compliance with B.1.a.:

Any grab sample:

Settleable Matter

The arithmetic average of any 6 or more samples collected on any day	0.5 ml/l-hr. max.
80% of all individual samples collected during maximum daily flow over any 30-day period	0.4 ml/l-hr. max.
Any sample	1.0 ml/l-hr. max.

3. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).

4. The pH of the discharge shall not exceed 8.5 or be less than 6.5.

5. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

   TOXICITY: The survival of a test organism acceptable to this Regional Board in 96-hour bioassays of the effluent as discharged shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

6. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: 1/

Constituent	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l(kg/day)	0.01(0.05)	0.02(0.11)
Cadmium	mg/l(kg/day)	0.02(0.11)	0.03(0.16)
Total Chromium	mg/l(kg/day)	0.005(0.026)	0.01(0.05)
Copper	mg/l(kg/day)	0.2(1.06)	0.3(1.59)
Lead	mg/l(kg/day)	0.1(0.53)	0.2(1.06)
Mercury	mg/l(kg/day)	0.001(0.005)	0.002(0.011)
Nickel	mg/l(kg/day)	0.1(0.53)	0.2(1.02)
Silver	mg/l(kg/day)	0.02(0.11)	0.04(0.21)
Zinc	mg/l(kg/day)	0.3(1.59)	0.5(2.65)
Cyanide	mg/l(kg/day)	0.1(0.53)	0.2(1.06)
Phenolic Compounds	mg/l(kg/day)	0.5(2.65)	1.0(5.3)
Total Identifiable Chlorinated Hydrocarbons	mg/l(kg/day) 2/	0.002(0.011)	0.004(0.021)

1/ These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

2/ Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, Chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

7. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria when verified by a repeat sample taken within 48 hours.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place.

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alternation of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Un-ionized ammonia	0.025 mg/l as N Annual Median 0.4 mg/l as N Maximum

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order Nos. 74-206 and 76-42, adopted by the Board on December 17, 1974 and May 4, 1976 respectively. Order Nos. 74-206 and 76-42 are hereby rescinded.

2. The discharger shall comply with the following time schedule to assure compliance with the specifications of this Order:

   a. Compliance with Sections A.1., B.1.a.,b., c., d., B.3., B.5., C.1.a.,c., and C.2.d.:

Task	Completion Date
Full Compliance	July 1, 1977

   b. Compliance with effluent limitation B.6.:

Task	Completion Date	Report of Compliance Due
Documentation of compliance with effluent limitations	December 1, 1977	December 15, 1977

   This Regional Board will consider amendment of the effluent limitation B.6. if the discharger demonstrates that compliance cannot be achieved through a program acceptable to the Board for source control and pretreatment standards.

   c. The discharger shall comply with all other effluent and receiving water limitations, prohibitions, and provisions of this Order immediately upon adoption.

3. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

4. The discharger shall comply with the Self-Monitoring Program as ordered by the Executive Officer.

5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 except B.3.

6. This Order expires June 1, 1982. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

7. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 19, 1977.

FRED H. DIERKER
Executive Officer

Attachments:
Self-Monitoring Program
Standard Provisions
Reporting Requirements and Definitions

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR
SANITARY DISTRICT NO. 5 OF MARIN COUNTY
MAIN PLANT

NPDES NO. CA 0037753

ORDER NO. 77-88

CONSISTS OF

PART A

AND

PART B revised July 19, 1977

PART B

Sanitary District No. 5 - Main Plant

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D.)
E-001-D	At any point in the disinfection facilities for Waste E-001, at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Station	Description
C-1	At a point in Raccoon Strait, located approximately 150 feet northerly from the point of discharge.
C-2	At a point in Raccoon Strait, located in the discharge boil.
C-3	At a point in Raccoon Strait, located along the northeasterly side of Elephant Rock, a fishing stand.
C-4	At a point in Raccoon Strait, located approximately 150 feet southerly from the point of discharge.
C-R-1	At a point in Raccoon Strait, located approximately 500 feet northerly from the point of discharge.
C-R-2	At a point in Raccoon Strait, located approximately 500 feet southerly from the point of discharge.

D. LAND OBSERVATIONS

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
O-1 thru O-"n"	Bypass or overflows from manholes, pump stations or collection system Note: Initial SMP report to include map and description of each known bypass or overflow location
Reporting	- Shall be submitted monthly and include date time and period of each overflow or bypass

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

III. NON-APPLICABLE PARAGRAPHS OF PART A

A. Does not include the following paragraphs of Part A:

C-3
C-4
C-5: c, d

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No.

2. Was ordered by the Executive Officer on became effective immediately, and is ordered revised effective on the date as shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment: Table I

TABLE I -A

District No. 5
Main Plant*

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001			E-001-D		All C Sta.	All P. Sta.	All O Sta.				
TYPE OF SAMPLE	(3) C-24	G	(3) C-24	Cont	G	(3) C-24	G	O	O				
Flow Rate (mgd)	D			D									
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	2W		W										
Chlorine Residual & Dosage (mg/l & kg/day)					2/D								
Settleable Matter (ml/1-hr. & cu. ft./day)		D											
Total Suspended Matter (mg/l & kg/day)	2W		W										
Oil & Grease (mg/l & kg/day) (1)	3M (2)	2M											
Coliform (Total) (MPN/100 ml) per req't					3/W		M						
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste						3M							
Ammonia Nitrogen (mg/l & kg/day)			2/Y										
Nitrate Nitrogen (mg/l & kg/day)			2/Y										
Nitrite Nitrogen (mg/l & kg/day)			2/Y										
Total Organic Nitrogen (mg/l & kg/day)			2/Y										
Total Phosphate (mg/l & kg/day)			2/Y										
Turbidity (Jackson Turbidity Units)			M				M						
pH (units)		D					M						
Dissolved Oxygen (mg/l and % Saturation)		D					M						
Temperature (°C)		D					M						
Apparent Color (color units)			M				M						
Secchi Disc (inches)							M						
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)		W					M						
Arsenic (mg/l & kg/day)			3M										
Cadmium (mg/l & kg/day)			3M										
Chromium, Total (mg/l & kg/day)			3M										
Copper (mg/l & kg/day)			3M										
Cyanide (mg/l & kg/day)			3M										
Silver (mg/l & kg/day			3M										
Lead (mg/l & kg/day)			3M										

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001		E-001-D		All C Sta.	All P Sta.	All O Sta.				
TYPE OF SAMPLE	C-24	G	C-24Cont	G	C-24	G	O	O				
Mercury (mg/l & kg/day)			3M									
Nickel (mg/l & kg/day)			3M									
Zinc (mg/l & kg/day)			3M									
Phenoic Compounds (mg/l & kg/day)			3M									
All Applicable Standard Observations		D				M	W	E				
Bottom Sediment Analyses and Observations												
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			3M									
Un-ionized ammonia as N (mg/l)						2Y						

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in April and once in September

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

*During any day when bypassing occurs from any treatment unit(s) in the plant, the monitoring program for the effluent shall include the following in addition to the above schedule for sampling, measurement and analyses:

1. Composite sample for BOD, Total Suspended Solids, oil and grease (influent and effluent)
2. Grab sample for coliform (total and fecal), Settleable matter, and chlorine residual (continuous or every two hours)
3. Continuous monitoring of flow.

FOOTNOTES FOR TABLE I

(1) Oil and grease sampling shall consist of 3 grab samples taken at equal intervals during the sampling day, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates at the time each grab sample was analyzed.

(2) Grab sample.

(3) An equal volume 24-hour composite sample may be substituted in lieu of a flow proportioned 24-hour composite sample until this variation is terminated by written notice by the Executive Officer.